

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

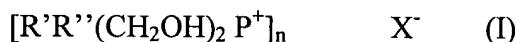
Listing of Claims:

1-32 (Canceled)

33. (New) A method of treating sewage sludge to reduce the pathogen content of said sludge, the method comprising the steps of:

(a) adding to the sludge an effective amount of a phosphorus-containing compound, wherein the phosphorus-containing compound is a phosphonium compound, wherein the phosphonium compound is either:

- (i) a tetrakis(hydroxyorgano)phosphonium salt; or
- (ii) a compound of formula (I)



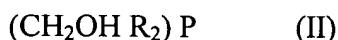
wherein:

n is the valency of X;

R' and R'', which are the same or different, are selected from an alkyl, hydroxyalkyl, alkenyl or aryl moiety and X is an anion; or

wherein:

the phosphorus-containing compound is an alkyl-substituted phosphine as shown in formula (II):



wherein:

each R, which are the same or different, is selected from an alkyl, hydroxyalkyl, alkenyl or aryl moiety; and

(b) keeping the phosphorus-containing compound in contact with the sludge for sufficient time to reduce the amount of pathogens present in the sludge by an amount equivalent to a logarithmic reduction of 2 or more.

34. (New) The method as claimed in claim 33, wherein the log reduction of 2 or more is achieved over a 24-hour period.

35. (New) The method as claimed in claim 33, wherein the phosphorus-containing compound is kept in contact with the sludge for sufficient time to reduce the amount of pathogens present in the sludge by a log reduction of 3 or more.

36. (New) The method as claimed in claim 35, wherein the phosphorus-containing compound is kept in contact with the sludge for sufficient time to reduce the amount of pathogens present in the sludge by a log reduction of 4 or more.

37. (New) The method as claimed in claim, wherein the pathogens are bacteria.

6.(New) The method as claimed in claim, wherein the sludge has undergone anaerobic digestion prior to step (a).

38. (New) The method as claimed in claim 33, wherein R' and R'' are between 1 and 20 carbon atoms in length.

39. (New) The method as claimed in claim 33, wherein X is selected from the group consisting of chloride, sulphate, phosphate, acetate, oxalate and bromide.

40. (New) The method as claimed in claim 33, wherein the phosphonium compound is tetrakis(hydroxymethyl) phosphonium sulphate.

41. (New) The method as claimed in claim 33, wherein the phosphonium compound is selected from the group consisting of tetrakis(hydroxymethyl) phosphonium chloride, tetrakis(hydroxymethyl)phosphonium bromide, tetrakis(hydroxymethyl)phosphonium phosphate, tetrakis (hydroxymethyl) phosphonium acetate and tetrakis(hydroxymethyl)phosphonium oxalate.

42. (New) The method as claimed in claim 33, wherein the amount of phosphorus-containing compound to be added to the sludge in step (a) is up to 10000mg/l.

43. (New) The method as claimed in claim 42, wherein the amount of phosphorus-containing compound to be added to the sludge is 100-2500mg/l, optionally 200-1000mg/l.

44. (New) The method as claimed in claim 33, wherein the amount of phosphorus-containing compound to be added to the sludge is expressed relative to dry solids weight and the amount to be added is up to about 30%, optionally from 0.1 to 10% by weight of dry solids.

45. (New) The method as claimed in claim 44, wherein the amount of phosphorus-containing compound to be added is from 0.2 to 5%, optionally from 0.4 to 2%, by weight of dry solids.

46. (New) The method as claimed in claim 33, wherein step (b) of the method of the present invention is carried out over a period of from 1 second to 14 days, optionally from 15 seconds to 24 hours .

47. (New) The method as claimed in claim 33, wherein the pathogens present in the sludge are selected from the group consisting of bacteria, viruses, protozoans and helminths.

48. (New) The method as claimed in claim 47, wherein the bacteria are selected from the group consisting of *Escherichia coli*, *Salmonella spp.*, *Shigella spp.*, *Vibrio cholerae*, *Bacillus cereus*, *Listeria monocytogenes*, *Campylobacter spp.* and *Yersinia pesti*.

49. (New) The method as claimed in claim 47, wherein the viruses are selected from the group consisting of rotaviruses, calciviruses, group F adenoviruses and astroviruses.

50. (New) The method as claimed in claim 47, wherein the protozoans are selected from the group consisting of *Entamoeba spp.*, *Giardia spp.*, *Balantidium coli* and *Cryptosporidium spp.*

51. (New) The method as claimed in claim 47, wherein the helminths are selected from the group consisting of *Ascaris lumbricoides* (roundworm), *Trichuris trichiura* (whipworm), *Ancylostoma duodenale* (hookworm), *Strongyloides stercoralis* (threadworm), *Schistosoma spp.*, *Taenia saginata* (beef tapeworm), *Taenia solium* (pork tapeworm) and their eggs.